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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/708,569	11/09/2000	Makiko Endo	35.C14920	2291

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EXAMINER

SCHWARTZ, PAMELA R

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 05/08/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/708,569

Applicant(s)

ENDO ET AL.

Examiner

Pamela R. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-36, 39, 50 and 52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-36, 39, 50 and 52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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1. All previously cited references are of record and have been considered.
2. Claims 23-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. These claims are broader than the enabling disclosure because the disclosure requires the presence of a recording medium on which to form the image. There is no disclosure of forming such images as self-sustaining articles in the absence of a medium or support.
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 24-27, 30, 33-36, 39, 50 and 52 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Miyabayashi (EPO 0900831). The reference discloses applying colorant and fine particles of polymer onto a recording medium where the fine particles chelate with a metal ion on the surface of the recording medium (see page 5 of the reference). According to the reference disclosure, when the colorant is a dye, the fine particles are left on the surface of the medium and incorporate part of the dye therein. While applicants' argue that the particles are fused, the reference disclosure to the contrary is clear (see for example, page 5, lines 46-49). At lines 13-15, the reference discloses an

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embodiment in which the particles form a film, but this is a preferred embodiment and the overall disclosure of the reference is not so limited. It is believed that the "feathering portion" referred to in claim 26 will inherently be formed by the process of adsorption onto the particles at the periphery of the aggregates. In addition, there will inherently be a higher proportion of coloring material in this region because few or no fine particles are present. The fine particles are .005 to .3 μ in diameter (see [0027]). The reference discloses that the dye will penetrate into the recording medium to some extent ([0025]).

Finally, claim 52 includes a method of making limitation (i.e. that the particles are agglomerated through the coloring material). Without further explanation, it is unclear to the examiner if this would have any impact on the final product or if one can tell in the final product if the colorant is agglomerated through the fine particles or vice versa. Applicants may overcome rejection of this claim if they can demonstrate that agglomeration of the particles through the colorant will render the article structurally distinct from that of the prior art article.

4. Claims 23-27, 29-36, 39, 50 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyabayashi (EPO 0900831). See the description given above in section 2.

Claim 29 is directed to a property of the particles that they would not have in the finally claimed product. However, since the zeta potential is what will permit them to form a chelate and aggregate, it would have been obvious to utilize particles of sufficient zeta potential to achieve desired aggregation. Claim 23 is directed to the visual

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properties of the produces image. It would have been obvious to one of ordinary skill in the art to optimize results by utilizing materials that give desired image density and saturation. With respect to claims 31 and 32, it would have been obvious to one or ordinary skill in the art to utilize multiple colors to achieve multicolor effects. The reference discloses on page 7, colorants that are yellow, black, blue, and red so it would have been obvious to one of ordinary skill in the art to utilize colorants disclosed by the reference for their concomitant function therein.

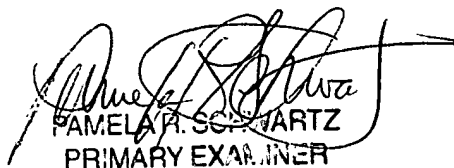
5. Patents to Takahashi et al (5,549,740 and 5,624,484), Kurabayashi et al (6,027,210), Ono et al. (6,238,045), Shimomura et al (EP 0776950), and Shirota et al. (5,792,249) are all commonly assigned and disclose aggregates formed on the surfaces of recording media through interaction of polar materials including one or more colorants on the surface thereof. None of these references disclose fine particles (excluding pigments) and it is unclear if any of the materials therein are actually in the form of fine particles. It is requested that applicants clarify the record with respect to this issue.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela R. Schwartz whose telephone number is 703-308-2424. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on (703) 308-0449. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

PRSchwartz
May 4, 2003



PAMELA R. SCHWARTZ
PRIMARY EXAMINER